DOCUMENT RESUME

ED 323 043 RC 017 645

AUTHOR Brown, Michael D.
TITLE Spermicidal Condoms: Effective Primary Protection against AIDS, Other STDs, and Unintended Conceptions. We Can Reduce the Number of Teen Pregnancies.
PUB DATE 90
NOTE 7p.
PUB TYPE Reports - Descriptive (141) -- Information Analyses (070) -- Journal Articles (080)
JOURNAL CIT The IHS Primary Care Provider; v13 n2 p15-16 Feb 1988

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Acquired Immune Deficiency Syndrome; American Indian Education; *American Indians; *Contraception; Disease Control; Elementary Secondary Education; Health Education; Health Programs; *Pregnant Students; Prevention; *Sex Education; Unwed Mothers; Venereal Diseases
IDENTIFIERS Condoms; Indian Health Service; *Sexually Transmitted Diseases

ABSTRACT

This document consists of two articles on sex education programs aimed at reducing sexually transmitted diseases (STDs) and unintended pregnancies among American Indians. Both articles describe the problems of unwanted pregnancies and STDs, including acquired immune deficiency syndrome. During 1987, there were more than 3,000 live births to Native American girls ages 17 and younger. The first article describes how the use of over-the-counter spermicidal latex condoms helps prevent unwanted pregnancies, transmission of the AIDS virus, and other STDs. The article calls for more public education regarding the use of condoms and suggests condom dispensation by Indian Health Services. The second article discusses some of the negative outcomes of early sexual activity and suggests some strategies that Native American communities might find useful. One successful rural South Carolina sex education program is described. The article concludes that the South Carolina model can be adapted to Indian health service programs, given the proper interest and initiative. The two articles list about 40 references. (TES)

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ED323043

THE IHS PRIMARY CARE PROVIDER

March 1990
Volume 15, Number 3

Spermicidal Condoms: Effective Primary Protection Against AIDS Other STDs, and Unintended Conceptions We Can Reduce the Number of Teen Pregnancies

RC017645

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Spermicidal Condoms

Effective Primary Protection Against AIDS, Other STDs, and Unintended Conceptions

Michael D. Brown, RN, BSN, Clinic Nurse, PHS Indian Health Center, Haskell Indian Junior College, Lawrence, Kansas.

The Problem

Incurable genital herpes, sterility-causing chlamydia and gonorrhea, and other sexually transmitted diseases (STDs) produce serious morbidity among Native Americans. As a result, STDs tax Indian Health Service (IHS) resources to diagnose and treat people who have STDs as well as trace their sexual contacts.[1-3] In addition, 39.8 percent of all live births for Native American females in 1984 were out-of-wedlock.[4] The emotional and social costs associated with these probably unplanned conceptions are great and commonly continue lifelong for the mother and her offspring.[3] Those unplanned pregnancies that end in induced abortions also exact heavy financial and emotional burdens.

The international epidemic of currently incurable and always fatal acquired immune deficiency syndrome (AIDS) is spreading among Native Americans in a similar pattern as in the United States populations as a whole.[5-7] The estimated mean cost for inpatient care of an AIDS patient is approximately $45,000.[7] While most AIDS cases have occurred in persons who are sexually active homosexuals/bisexuals or abusers of intravenous (IV) drugs, the disease can be spread by heterosexual activity:[8] a small, but increasing proportion of reported cases in the U.S. have been attributed to heterosexual spread. Over 500 infants and young children who have been reported to have AIDS, acquired their infection with human immunodeficiency deficiency virus (HIV) either *in utero* or at the time of birth; or possibly by breast feeding.

Reliable AIDS Prophylaxis

Since 1982, American condom manufacturers have marketed over-the-counter spermicidal latex condoms that help prevent the transmission of human immunodeficiency virus (HIV),[9] the pathogen that causes AIDS.[5] The nonprescription latex condom is precoated on both the inside and outside with a lubricant containing nonoxynol-9, the active ingredient in most vaginal spermicides.[9] Public health and AIDS experts report that both sperm and lymphocytes can be infected with HIV and serve as vectors to help transmit the AIDS virus through sexual contact.[5,10] The spermicidal latex condom probably helps provide effective primary prevention against HIV transmission through at least five mechanisms of action: (a) catching ejaculated sperm, (b) barring the passage of the AIDS virus and larger lymphocytes through the condom, (c) rapidly reducing the percentage of motile sperm, (d) quickly inactivating the AIDS virus itself, and (e) destroying lymphocytes.

Investigators, including several from the U.S. Public Health Service Centers for Disease Control and the National Institutes of Health, obtained research results suggesting that the latex condom's physical barrier may help stop the spread of HIV during sexual intercourse.[11-14] Researchers recently found the latex condom to be an adequate physical barrier to passage of the AIDS virus.[15-20] Dale and Rodgers-Neame *et al* determined the effect of spermicidal condoms on sperm activity.[9,21] Both of these studies indicated that nonoxynol-9 quickly decreased the percentage of active sperm. Dale specifically determined the percentage of active sperm 30, 60, and 120 seconds after they had been ejaculated into either spermicidal or nonspermicidal latex condoms (see Table 1). Researchers from the Centers for Disease Control and the University of Massachusetts Medical Center independently found that a concentration of just 0.05 percent nonoxynol-9 (at least 100 times more dilute than the 5-or-more percent concentration coating spermicidal latex condoms) rapidly inactivated HIV and reduced the viability of AIDS virus-infected lymphocytes in the laboratory.[10,18,22]

Table 1. Percent active sperm at three time-intervals after sperm collection in either spermicidal or nonspermicidal latex condoms (see Hatcher, et al, p.236).

Seconds After Ejaculation	Active Sperm (%) in Spermicidal Condoms	Active Sperm (%) in Nonspermicidal Condoms
30	10.3	55.9
60	4.3	52.3
120	1.5	50.2

Effective Prevention of Other STDs

One study suggests that the over-the-counter spermicidal latex condom, **used correctly,** can help provide efficacious primary prevention against specific STDs.[20] Other investigations indicate that either the condom by itself or spermicides alone will help prevent most STDs.[9]

Reliable Birth Control

In a study by Potts *et al* the contraceptive user failure rate* of nonprescription spermicidal synthetic condoms was less than 1 percent (0.83 percent) — better than both the commonly-cited user failure rates of 10 percent for nonspermicidal condoms and 2 percent for widely used birth control pills.[9] Those findings are indirectly supported by the results of both Dale and Rodgers-Neame *et al* cited above.[9,21] Further, the female sex partner using vaginal spermicidal foam containing nonoxynol-9 while the male partner used a spermicidal latex condom can significantly help prevent unintended conceptions as well as AIDS and other STDs (in case the condom breaks, leaks, slips off, or otherwise fails).[9]

Use of Spermicidal Latex Condoms

Subjects have been reported to find spermicidal or nonspermicidal condoms to be esthetically acceptable.[9,20,21,23] Condoms **(which foster males sharing effective contraception responsibility)** and spermicides have lower mortality risks compared to illegal induced abortions, legal induced abortions, intrauterine devices (IUDs), and birth control pills.[9] In 1981, Jick *et al* published a widely discussed research report suggesting that spermicide use is associated with an increased incidence of congenital anomalies.[9] However, now Jick *et al*, themselves, and other pertinent experts state that spermicides may not be teratogenic.[9]

* The term "user failure rate," here, indicates the projected annual pregnancy rate among 100 "typical" users at the end of their first year of practicing a particular contraceptive method.[9]

Summary

Evidence suggests that over-the-counter, spermicidal latex condoms are relatively safe, convenient, esthetically satisfactory, and probably effective in helping prevent AIDS, other STDs, and unplanned conceptions.[21,23-31] However, it is important to note that such condoms are not 100 percent effective in preventing these complications of sexual activity.[20] Sexual abstinence remains the only guaranteed method of contraception and the avoidance of the sexual acquisition of AIDS.[32]

Education is an important tool in health promotion and disease prevention; IHS health care providers are encouraged to give patients comprehensive information on spermicidal latex condoms so they can make informed decisions. In addition, IHS providers may want to consider persuading their facilities and Area Offices to buy and dispense spermicidal latex condoms, as the Oklahoma City Area Office has done.*

* When considering the cost involved, it might be useful to know that spermicidal latex condoms can be obtained from Ansell (Ansell America, Attention Patricia Balto, 78 Apple Street, Tinton Falls, NJ 07724, toll-free 1-800-524-1377). Ansell recently began distributing more durable extra strength spermicidal latex condoms (containing a 6.6 percent concentration of nonoxynol-9) for 11.0¢ per condom. Plain latex condoms, available previously in the Oklahoma City Area, were 6.0¢ each. IHS providers may be able to find alternative sources for generic spermicidal latex condoms that are even less costly while still meeting the Food and Drug Administration condom industry quality control standards.

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THE IHS PRIMARY CARE PROVIDER

March 1990 Volume 15, Number3

We Can Reduce the Number of Teen Pregnancies

Michael D. Brown, RN, BSN, Clinic Nurse, Indian School Health Center, Haskell Indian Junior College, Lawrence, Kansas.

Introduction

The negative sequelae of early sexual activity are many. All across the nation health care professionals and community organizations are trying to develop strategies to prevent early sexual experience or prevent the potential serious consequences of early sexual experience. This paper discusses some of the negative outcomes of early sexual activity, describes a successful preventive community program, and suggests that Native American communities might find some of the strategies described herein useful.

Description of the Problem

During 1987, there were 1,641 live births to 17-year-old Native American girls, 953 to 16-year olds, 469 to 15-year olds, and 162 to those 14 years old and younger.[1]

During 1983-1985, 20.0 percent of all Native American new mothers were 19 years old or younger; in 1984 13.1 percent of new mothers of all races/ethnicities in the United States were 19 or younger.[2] During those same years, the birth rate for Native American females 19 or younger was 26.2 live births per 1,000 females compared to only 12.1 live births per 1,000 females 19 or younger among all races/ethnicities in the United States. Indian girls also are experiencing induced abortions, spontaneous abortions, and fetal deaths.

Adolescent conceptions can have a wide range of major negative long-term effects on the girl, her partner, their baby(ies), their immediate and extended families, and others close to them. In 1984, 38 percent of all Native American new mothers were not high school graduates, while just 18 percent of white new mothers in the United States had not finished high school.[3] In that same year, 40 percent of all American Indian new mothers were not married, yet only 13 percent of white new mothers in the United States were unmarried.

During 1988, the United States spent $19.83 billion on three programs (food stamps, Medicaid, and Aid to Families with Dependent Children) for families begun when the mother was 19 or younger.[4]

Indian school-aged girls *and* boys can take actions that protect them 100 percent (abstinance) or almost 100 percent (contraception) from causing unintended conceptions.[5]

One of the few beliefs which both "pro-choice" and "pro-life" advocates often have in common is that, pertaining to adolescent abortion, it clearly is in the best interest of unmarried teenagers for them not to experience an unintended conception in the first place.

The heavy social, economic, and emotional burden of unintended pregnancy on the young people involved, the baby(ies) involved, the families, and the tribal community warrants a search for a cost-effective strategy that can successfully enable single Native American school-age girls and boys to avoid pregnancy.

Many primary health care professionals who provide services to Native Americans have spent much time, energy, and other resources trying for years to help reduce the number of unintended conceptions. Despite their good intentions and apparently sound intervention strategies, a large proportion of those health care professionals evaluate their efforts as unsuccessful in terms of actual outcomes; the number of problem pregnancies occurring among school-age Indians remain too high.

A Successful Program is Examined

One public school system serving a rural, low-income, undereducated, primarily minority population in South Carolina lowered its pregnancy rate among female students 14-17 years of age by an impressive 63 percent between 1982 and 1984.[6] Ongoing evaluation showed that that rate fell even further over the next two years. The 1984, 1985, and 1986 annual pregnancy rates for girls 14-17

years of age in three comparable South Carolina counties were generally at least 100 percent higher than the 1984-1986 rates for the intervention area.

Perhaps an examination of that school district's successful community-reinforced program will reveal intervention approaches that IHS health care providers can adapt to help reduce unintended conceptions in the schools and communities they serve.

The Bamberg County, South Carolina School District No. 2, with approximately 550 students in the eighth through twelfth grades, started its intervention program in October, 1982. The program revolves mainly around involvement by parents, public school administrators and faculty members, churches and their clergy, chosen student leaders ("peer educators"), a full-time local professional health education coordinator, the school system's governing board, other elected community officials, health care and other relevant civic agencies, the mass media, and other local interested citizens.

The program's primary objective is that teenage and pre-teenage girls *and* boys delay first sexual intercourse at least until they graduate from high school. For those school-age girls *and* boys who do have sexual intercourse, the program's secondary objective is for them to either (1) stop having sexual intercourse until they finish high school or (2) correctly use efficacious contraception. The program targets both girls *and* boys, and not just girls as often occurs in other programs.

Active involvement by parents and clergy in several facets of planning, implementation, and program maintenance was solicited even before the intervention began. Parents and clergy could attend a series of five weekly 1 1/2 hour educational sessions on helping students: (1) communicate well with parents and others, (2) develop a reasonable value system, (3) acquire appropriate decision-making skills, (4) enhance their self-esteem, and (5) learn facts about human reproduction and family planning. Several of those parents and clergy still are some of the program's most visible promoters.

Before the intervention started, and continuing thereafter, faculty members and school guidance counselors were recruited to take three free graduate-level courses during the spring and summer semesters. Those courses were intended to assure that educators have the abilities to help students have more open discussion on human sexuality with parents and others, develop an appropriate sense of individual responsibility, better understand their own behavior, reduce their concerns about their normal development and feelings, gain accurate human sexuality knowledge, and learn to be more assertive with others.

Six local school system elementary, middle, and high school teachers then prepared a family life and sex education curriculum with assistance from 15 other local school district faculty members and executives, and three teaching consultants. They and other local residents participated in the development of the kindergarten through twelfth grade general educational plan with special education students in mind. As part of that curriculum, pregnancy prevention-related information is taught in a variety of pertinent class subjects and/or courses.

The female *and* male peer-educators are selected mostly from tenth- and eleventh-grade students. These students must demonstrate a strong interest in communicating informally and well with fellow students about pregnancy prevention facts and other aspects of human sexuality. Peer-educator applicants cannot participate without their parents' consent. They also must complete 70 hours of classes before and after school and on weekends on topics such as (1) good communication with parents and others, (2) appropriate values clarification, (3) sound decision-making skills, (4) healthy self-esteem, and (5) accurate human reproduction and contraception information.

More details about the program are contained in the 40-page federal publication "Reducing Unintended Adolescent Pregnancy Through School/Community Educational Interventions: A South Carolina Case Study."*

Discussion

Many of the most effective steps unmarried girls and boys 17 or younger can take to prevent unintended conceptions also help to reduce their exposure to sexually transmitted diseases (STDs) such as gonorrhea, syphilis, genital herpes, chlamydia, and the Acquired Immune Deficiency Syndrome (AIDS).

The age group with the highest rates for most non-AIDS STDs is 15- to 24-year olds for Native Americans and all races/ethnicities in the United States. During 1985, in eight Indian Country states, the collective gonorrhea rate for Native Americans was almost twice the gonorrhea rate for all races/ethnicities in those eight states.[7] That year, in those same eight states, the collective syphilis rate for American Indians was nearly four times the syphilis rate for all races/ethnicities.

As of November 1989 AIDS had been diagnosed in over 23,400 Americans 20-29 years of age.[8] People can take years after they are initially infected with the AIDS virus to start showing early signs of AIDS; it is possible that many of those 23,400-plus young Americans known to have AIDS were infected with the AIDS virus when they were teenagers.

Conclusion

The potential for at least elements of such an effective community-supported program to be fairly adaptable to IHS

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* *This publication can be obtained by sending a check for $3.50 (made out to the University of South Carolina) to the attention of Professor Murray L. Vincent, Department of Health Promotion and Education, University of South Carolina, Columbia, South Carolina 29208. (803) 777-5152 or (803) 777-6255. Other facts can be obtained from the local professional coordinator, Charles G. Johnson, Community Health Educator, Teen Life Center, Denmark-Olar School District, P.O. Box 345, Denmark, South Carolina 29042. (803) 793-5001 or (803) 777-6255.*

or tribal health care facilities and related settings appears to be great. That potential likely will never be realized, however, unless enough IHS health care providers, patients, parents, and/or other interested local residents ask the heads of their health care and related agencies, traditional healers, tribal elders and other tribal leaders, school board members, other elected community officials, elementary/middle/high school executives, clergy and traditional religious leaders, heads of the local parent-teacher organization and professional educators' association, and/or other civic leaders to start as soon as possible to plan the implementation of such interventions.

Detailed evaluation and analysis strongly suggest that the Denmark-Olar (South Carolina) School District sexual health promotion program has had reasonable long-term success. That intervention model is intended for application in either small communities or neighborhoods of large communities or cities. Involving a community's key social forces (parents, youth, health care professionals, public school educators, religious leaders, mass media, etc.) can effectively promote sexual health and reduce unintended conceptions among single adolescents and prevent AIDS and other STDs among those young people. □

Acknowledgement

This author recognizes Professor Murray Vincent, University of South Carolina, Columbia, South Carolina and Charles G. Johnson, Denmark-Olar School District, Denmark, South Carolina for their assistance in reviewing this paper.

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PCC Information Retrieval Capabilities Expanded

William B. Mason, Director, Information Systems Division, OHPRD, Tucson, Arizona.

The Resource and Patient Management System (RPMS) Patient Care Component (PCC), now operational in 56 IHS, "638," and State of Alaska hospitals and clinics, has recently expanded its information retrieval capability in the areas of group and aggregate data for patient and Service Unit management. Below are described new or enhanced PCC features being released to a limited number of beta test sites at the end of January, 1990, with general distribution to all PCC sites in the following quarter.

Management Reports.

A new set of menu-selectable reports has been developed which display a variety of population, workload, quality assurance, and planning information. The groups of reports that are included in the main reports menu are listed in Table 1.

Table 1. Groups of reports found in the main reports menu.

Patient Listings
Resource Allocation/Workload Reports
Inpatient Reports
APC Reports
Ambulatory Visit Counts
Quality Assurance Reports
Billing Reports
Query System